[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-2984; Directorate Identifier 2015-NE-21-AD]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all General Electric Company (GE) GEnx-1B54, -1B58, -1B64, -1B67, and -1B70 turbofan engine models. This proposed AD was prompted by reports of two in-flight shutdowns (IFSDs) caused by high-pressure turbine (HPT) rotor stage 1 blade failure. This proposed AD would require inspection and conditional removal of affected HPT rotor stage 1 blades. We are proposing this AD to prevent failure of the HPT rotor stage 1 blades, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact General Electric Company, GE Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: aviation.fleetsupport@ge.com. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-2984; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Christopher McGuire, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; email: chris.mcguire@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this NPRM. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2015-2984; Directorate Identifier 2015-NE-21-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

We propose to adopt a new AD for all GE GEnx-1B54, -1B58, -1B64, -1B67, and -1B70 turbofan engine models. This proposed AD was prompted by reports of two IFSDs caused by HPT rotor stage 1 blade failure. This proposed AD would require inspection and conditional removal of affected HPT rotor stage 1 blades. This condition, if not corrected, could result in failure of the HPT rotor stage 1 blades, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

Related Service Information

We reviewed GE GEnx-1B Service Bulletin (SB) No. 72-0267 R00, dated April 10, 2015. The SB describes procedures for borescope inspection (BSI) of the HPT rotor stage 1 blades.

FAA's Determination

We are proposing this NPRM because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This NPRM would require initial and repetitive BSI and conditional removal of affected HPT rotor stage 1 blades.

Costs of Compliance

We estimate that this proposed AD will affect 4 engines installed on airplanes of U.S. registry. We also estimate that it will take about 2 hours per engine to comply with this proposed AD. The average labor rate is $85 per hour. Based on these figures, we estimate the total cost of this proposed AD to U.S. operators to be $680.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

General Electric Company: Docket No. FAA-2015-2984; Directorate Identifier 2015-NE-21-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all General Electric Company (GE) GEnx-1B54, -1B58, -1B64, -1B67, and -1B70 turbofan engines with high-pressure turbine (HPT) rotor stage 1 blade, part number 2305M26P06, installed.

(d) Unsafe Condition

This AD was prompted by reports of two in-flight shutdowns caused by HPT rotor stage 1 blade failure. We are issuing this AD to prevent failure of the HPT rotor stage 1 blades, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) After the effective date of this AD, perform an initial borescope inspection (BSI) of the convex surface of the HPT rotor stage 1 blades for axial cracks from the platform to 30% span, within 1,000 blade cycles since new or 25 cycles in service, whichever comes later, and disposition as follows:

(i) If any axial crack with a length greater than or equal to 0.3 inch is found, or if any axial crack of any length turning in a radial direction is found, or if more than one axial crack of any length is found, remove the cracked blade before further flight.

(ii) If an axial crack is found with a length greater than or equal to 0.2 inch and less than 0.3 inch, remove the cracked blade within 10 blade cycles in service.

(iii) If an axial crack is found with a length greater than or equal to 0.1 inch and less than 0.2 inch, inspect the cracked blade within 50 blade cycles since last inspection (CSLI).

(iv) If an axial crack is found with a length less than 0.1 inch, inspect the cracked blade within 100 blade CSLI.

(v) If no cracks were found, perform a BSI of the blades within 125 blade CSLI.

(2) Thereafter, perform a repetitive BSI of the convex surface of the HPT rotor stage 1 blades for axial cracks from the platform to 30% span within 125 blade CSLI and disposition as specified in (e)(1)(i) through (e)(1)(v), or remove the blades from service.

(f) Definition

For the purpose of this AD, a "blade cycle" is defined as the number of engine cycles that a set of rotor blades has accrued, regardless of the engine(s) in which they have operated.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(h) Related Information

(1) For more information about this AD, contact Christopher McGuire, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; email: chris.mcguire@faa.gov.

(2) GE GEnx-1B Service Bulletin No. 72-0267 R00, dated April 10, 2015 can be obtained from GE using the contact information in paragraph (h)(3) of this proposed AD.

(3) For service information identified in this proposed AD, contact General Electric Company, GE Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: aviation.fleetsupport@ge.com.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on August 21, 2015.

Colleen M. D'Alessandro,
Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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